

**MACHINIST
WG-3414-10**

METAL TRADES

I. POSITION AND ORGANIZATION INFORMATION**Position:**

Machinist, WG-3414-10

Purpose of position:

This job is established to perform, or assist in performing, metal machining work, including planning and laying out work, selecting and setting up machines, selecting and shaping metal cutting tools - in addition to operating a variety of metal machines, tools and attachments and performing precision handwork to fit, finish and assemble machined parts and equipment.

Organization:

Maintenance Branch, Facilities Mgmt Div

Organization goals:

The purpose of this branch is to provide emergency and scheduled maintenance and repair services.

II. MAJOR DUTIES**A. Duty:**

The employee troubleshoots, overhauls, machines and repairs various types and sizes of industrial plant/facilities equipment. Assignments frequently require extensive and detailed planning, set up and operation of a wide variety of machine tools. (100%)

Tasks:

1. Disassembles, inspects, and prepares condition reports on a wide range of industrial plant equipment.
2. Overhauls, rebuilds, or repairs, reassembles and tests equipment which includes frequent machining of parts and items.
3. As required, performs preventive maintenance on industrial plant equipment.
4. Completes work verification documents as required to certify that work was accomplished per specifications.
5. Plans and completes frequent and extensive machining on a wide variety of machine tools, as described below:
 - a. Plans and lays out machining work to manufacture or remachine items from raw stock, or castings, forgings, weldments, other fabrications or parts using machine tools.
 - b. Selects machine tools and attachments.
 - c. Selects types and shapes of cutting tools.
 - d. Sets up and operates (or sets up for others to operate) a wide variety

of metal machine tools such as: lathes, vertical and horizontal boring mills; bench, plain, or universal milling machines; shapers, slotters, planers; internal and external grinders; thread grinders; radial drills; broaching machines.

e. Uses auxiliary machine tool attachments such as rotary vises, dividing heads, taper attachments, magnetic chucks, vertical milling heads, tapping attachments, rotary tables.

6. Maintains specified dimensional accuracy and tolerances.

7. Performs precision hand fitting, finishing, and assembly.

8. Interprets detailed drawings, technical manuals, and/or specifications for the material to be used and the design of the end item.

B. Other Work Requirements

1. The employee may be required to work overtime.
2. The employee may be recalled to duty.
3. This position requires the employee to drive a motor vehicle. An appropriate, valid driver's license is required for the position.

III. CLASSIFICATION FACTORS

Factor 1. Knowledge

1. Practical knowledge of and skill in applying the full range of conventional and/or numerically controlled machining principles, processes, and techniques.
 - Skill in planning work sequences.
 - Ability to lay out reference points, lines, dimensions, and angles using shop mathematics and handbook formulas.
 - Ability to select and set up machine tools and cutting tools.
 - Skill in operating a wide variety of conventional and/or NC machine tools.
 - Ability to perform precision handwork to fit, finish, and assemble machined parts and equipment.
 - Knowledge of how numerous metals, metal alloys and other materials react to different machine tools and processes and techniques.
 - Skill in using measuring instruments to maintain precise dimensions.
2. Knowledge of operating characteristics and design of a wide range of industrial plant equipment (IPE).
 - Skill in troubleshooting and repairing a variety of industrial plant equipment.

- Ability to use machine drawings, manufacturer technical manuals, and similar guides.
- Skill in setting up and operating various machine tools used in the machinist trade to manufacture or remachine IPE parts.

Factor 2. Responsibility

The machinist receives assignments through written or oral instructions accompanied by applicable specifications. Works with little or no guidance after receiving assignments. Makes independent judgments and decisions within the framework of accepted trades practices and processes. Independently plans and lays out work. Determines the most efficient machine procedures and determines attachments to be used. Accurately computes and maintains dimensions and tolerances. Consults with the supervisor or customer when proposing changes. Work is reviewed to insure that it meets specifications and accepted trade practices.

Factor 3. Physical Effort

The employee works in tiring positions for prolonged periods. The work requires frequent standing, bending, stooping, crouching, and arm movement. Some work may be occasionally performed in cramped areas, on temporary platforms, or overhead. The employee frequently lifts and carries items weighing up to 40 pounds and occasionally lifts heavier items with assistance.

Factor 4. Working Conditions

The employee usually works in machine shop areas or other enclosed areas which are sometimes noisy, dirty, or unheated. The employee is exposed to eye, skin, nose, and lung irritations from coolants, lubricants, and abrasive compounds, and to possible injuries and burns from flying metal chips, abrasive particles, and hot metal. The employee is also frequently exposed to the possibility of receiving cuts and serious injuries to hands and fingers from accidents while operating machines. To minimize or eliminate the effects of some of these conditions, the machinist follows numerous safety practices and wears or uses various protective devices such as machine tool shields, hard hats, safety glasses, gloves, face shields, hearing protection devices, and respirators. These devices may be uncomfortable and may be worn for long periods of time.

IV. CLASSIFICATION SUMMARY

In this position:

Duty A. 100% WG-3414-10 Machinist
Journey Level Maintenance, Industrial Plant Equipment

The classification criteria for the Machinist (3414) occupation and related work is based on the following US OPM Job Grading Standards and Guides:

Machinist, WG-3414 (TS-23 dated May 1973); Production Machinery Mechanic, WG-5350 (TS-40 dated November 1980); Trades Helper Jobs (TS-3 dated November 1968); Intermediate Jobs (TS-3 dated November 1968).

Grade: WG-10